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Bryan et al.

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[54] **HUMAN SPINAL DISC PROSTHESIS**

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Related U.S. Application Data

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[52] **U.S. Cl.** 623/17; 606/61; 606/86; 606/87
[58] **Field of Search** 623/16, 17; 606/60, 606/61, 72, 73, 86, 87

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[57] **ABSTRACT**

The invention relates to a spinal disc endoprosthesis. The endoprosthesis has a resilient body formed of one or more materials which may vary in stiffness from a relatively stiff exterior annular gasket portion to a relatively supple central nucleus portion. Concaval-convex elements at least partly surround that nucleus portion so as to retain the nucleus portion and gasket between adjacent vertebral bodies in a patient's spine. Assemblies of endoprosthetic discs, endoprosthetic vertebral bodies, and endoprosthetic longitudinal ligaments may be constructed. To implant this endoprosthesis assembly, information is obtained regarding the size, shape, and nature of a patient's damaged spine. Thereafter, one or more prosthetic vertebral bodies and disc units are constructed in conformity with that information. Finally, the completed and conformed vertebral body and disc assembly is implanted in the patient's spine.

9 Claims, 10 Drawing Sheets